SPECIFIC LANGUAGE IMPAIRMENT - WHEN *ONLY* LANGUAGE BECOMES DIFFICULT

Asifa Sultana
English and Humanities Department
BRAC University

ABSTRACT

Specific Language Impairment (SLI) is a language disorder that primarily affects oral language selectively. This impairment is not any sudden loss; rather some children are born with this disability. The impaired children exhibit this disorder by producing unusually faulty language, which the other children of their age have outgrown. Children with SLI are like the normally developing children in every other way except for some specific aspects of their L1. To identify this language difficulty, children have to be tested on their L1 through tests originally designed for their L1. Since this is a new phenomenon in a country like Bangladesh, we lack resources to identify and measure this. This paper is an attempt to present the case of SLI for a better understanding of the disorder. The paper illustrates the nature of the disorder and backs it up with the dominant theories that try to explain this. Also, considering the nature of difficulty and the exhibited problems, this paper suggests and explains some areas for testing in Bangla which may be able to identify the impaired children in our context.

I. INTRODUCTION

Language is one of the abilities that children master incredibly fast, and this mastery is almost complete by the time they are 5 years old. But this is not the case always. Many of us may have come across children who are unusually late in producing their first words and also their progress in their L1 is very slow compared to other children of their age. Among children displaying such symptoms, some are really unfortunate to not 'catch up' and later exhibit characteristics of Specific Language Impairment (SLI).

Delay in language acquisition or a very slow progress does not happen only due to specific language impairment. Sometimes this is caused by intellectual deficit, hearing problem or social deprivation as well. However, there are children without any such limitations, who are unable to acquire their first language within the expected time. This limitation develops specifically around language and that is how it gets the term Specific Language Impairment.

The aim of this paper is to review the many studies that have been conducted on Specific Language Impairment, which include the theoretical frameworks that explain the disorder and the language areas affected by it. On the basis of the previous research, towards the end I posit some potential areas in Bangla which can be used to identify the clinical markers for SLI. The claim here is not to make any strong remark about the nature of SLI in Bangla, rather I have only suggested several areas which the suspected population can be tested on to determine whether they have SLI or not. As further development, tests can be designed carefully on the identified areas and carried out among many sample populations and only then we will be able to make any significant statement about how the impairment exhibits in Bangla.

II. SPECIFIC LANGUAGE IMPAIRMENT OR SLI

Specific language impairment is a developmental disorder whereby children, without any social, psychological and neurological cause, have difficulties in acquiring or using oral language (Leonard, 1998). Therefore, such children are a lot like the other 'normal' children of the same age in terms of their intelligence and cognitive abilities. Their only problem is a faulty production of language while using it in oral communication.

According to Leonard (1998), SLI children exhibit disability from the very beginning of using

language. Their first words are late, they develop a very small lexicon and their word learning ability during the pre-school years is less than the MLU[1]-matched normally developing children. Gradually when they begin to produce utterances using the grammar rules of a particular language, their difficulties seem to multiply and become more evident. Although SLI is a heterogeneous disorder and there is hardly any one set of problem areas that is displayed among all the impaired children, it has been reported that these children's difficulties are, in most cases, specific to grammar (Clahsen, 1989; Gopnik, & Crago, 1991). Therefore, a strong suggestion is that specific language impairment is a developmental disorder, which is primarily a grammatical deficit (Gopnik & Crago, 1991; Bishop, 1994). Children with SLI display severely impaired knowledge specially in using the morphological markers. According to Gopnik and Crago (1991), those markers are either absent or used randomly. The data obtained by Gopnik (1990b) present utterances like "three Christmas tree", "a computers", "Superman jump", "Jimmy don't like it, so they throw the bowl on the floor" and so on. However, within the realm of the morphological markers, not all of those are affected. It has been reported that children with SLI do not produce the past *–ed* morpheme but they do produce the progressive *–ing* (Crystal, 1987).

The linguistic areas where children generally have problems are

- Auxiliary and copula *be*

The man *was* singing happily.
She *is* an intelligent girl.

- Past morphemes:

I walk*ed* half a mile yesterday.
The shopkeeper count*ed* the money three times.

- Noun plural morphemes

There are three book*s* on the table.
Bring the box*es*.

- Pronouns

The landlord asked the girl to clean *her* apartment.
The boy did it to *himself*.

- Causatives

[1] MLU or mean length of utterance is the unit to measure the length of learners' utterances. MLU is measured generally based on the number of words, but sometimes the researchers choose to count the morphemes in children's utterances.

- Causatives

He walks everyday.
He *walks* the dog everyday.

- Passives

The boy hit the thief.
The thief *was hit* by the boy.

Gopnik and Crago (1991) conducted a set of tests with a family where many of the family members had such language disability. The test included both recognition and production tests covering the following grammatical areas: plural morphemes, pronouns (person and gender), passives, genitive markers, tense markers, derivations (verbs, nouns and adjectives) and thematic structures. Results revealed a general pattern that in the recognition tests, where the participants had to just make judgements on grammaticality the of sentences or carry out tasks based on their understanding of commands, they performed much better than the production tests. In most of the recognition tests, the participants were almost as good as the control group. However, the same areas (for example, plural morphemes), when tested in the production tests, were very difficult for them and the results showed significant difference between the two groups. But, tense markers (third person singular –s, past –ed) was one area where the participants had significant problems both in recognition as well as production. In the production test for tense marking, there was a gap-filling task (*Everyday he walks eight miles. Yesterday he _____.).* In response to this the subjects produced sentences like "Yesterday he had a rest", "Yesterday he walk" and "Yesterday he walks". Lely and Ullman (1996) too reported a similar finding where specially past inflections were difficult for the SLI group. As has been mentioned earlier in this paper, SLI is a heterogeneous disorder with the participants displaying not the same disability in their respective language use. But, the groups studied by different researchers display a fair degree of commonality among the subjects in terms of the problems areas, one of which is the past inflections.

Following are some extracts from the data presented in the study conducted by Bishop (1994). These are taken from the conversations between an adult 'normal' person and a specifically impaired child.

Conversation 1: Past inflections

Adult: So what happened then?
Child: erm w-
When we *get* back and we *have* to –
We had to ask my grandads, we *have* to go back to # home, and then mummy
taked to the garage to [<xx>]

Conversation 2: Pronoun

Adult: Why is it usually better to give money to a well-known charity than to a street beggar?
Child: cos <in> a charity, *them* have some money and *them* need money.

Conversation 3: Genitive markers

Child: *Bernard* mum said get to bed Bernard now
It is time to go to bed
Up the stairs # <steadily> with *Bernard*-Bernard's teddy bear

The symbols and their interpretations are the researcher's.[2]

III. LOOKING AT SLI AND DYSLEXIA

As it has been mentioned so far, Specific Language Impairment is a disorder primarily in oral communication. Another type of language disability, which is more common in our context, is dyslexia which involves difficulties in processing language and literacy skills. SLI and dyslexia are different from disorders like autism, deafness, retardation etc. because for these the criterion is that the subject has to have "adequate hearing and no major handicapping condition that might interfere with learning" (Bishop & Snowling, 2004, p. 858). Thus, SLI and dyslexia are two distinct language-based disorders which manifest in oral and literal communication respectively. At a deeper level, SLI differs from dyslexia in that, in a classic case of SLI the child is poor in phonological as well as non-phonological skills; whereas in dyslexia the problem lies only with phonological skills.

[2] Interpretation of the symbols
- broken off utterances
brief pause
<x> unintelligible syllable
<> best guess for the utterances

However, Bishop and Snowling (2004) pose a different suggestion while re-conceptualizing SLI and dyslexia. According to them, these two disorders are simply different manifestations of the same underlying problem and there is an etiological overlap between these two. Also "at the cognitive level, children with SLI usually have the same core phonological impairments that have come to be regarded as characteristic of developmental dyslexia" (878). Therefore, they suggest that these are not distinct disorders; rather they are different points in a continuum differing only in severity of the disability.

IV. SLI VIEWED FROM DIFFERENT PERSPECTIVES

There are three major suggestions made by different schools of researchers that try to account for specific language impairment. These are briefly discussed below.

1. Phonological deficit hypothesis

A phonological deficit hypothesis claims that SLI children have problems processing a particular set of grammatical aspects because "they have difficulty translating the auditory forms of words into a phonological code necessary for learning word forms" (Joanisse, 2004, 157). Their explanation is, for someone to learn a word and the different forms of it, (s)he has to be able to know the semantic significance of each phonological segment of the word. In other words, any word contains integrated semantic and phonological information which need to be 'connected' well in order to be processed. Thus, appropriate processing of the word forms demands that one should be able to see the difference between the words 'cook' and 'cooked' both in terms of the phonological differences and also how it causes a change in meaning. When a person is not able to translate the phonological elements into its semantic counterparts, the disability emerges.

2. Perceptual saliency hypothesis

The argument here is that the areas that are omitted in SLI are not salient enough for the children to notice. Therefore, features like plural *–s*, 3rd person singular *–s*, past *–ed* etc are dropped by the SLI children.

If this is the case, then all similar surface forms, irrespective of their grammatical roles, should be treated in the same way. But, Menyuk (1978) reported that very often the final sounds or clusters are omitted unless those are part of the stem. For example, children produced 'bees' as 'bee', but never produced 'no' for 'nose'. But the final /s/ sounds after both words are equally salient. Also, it has been reported that the plural -s and the possessive -s, though have the same phonological form, display different patterns of impairment (Johnston & Schery, 1976). These suggest that the impairment is not due to perception; rather it is rooted somewhere else.

3. Grammatical deficit hypothesis

This probably posits the strongest arguments to account for the impairment. This hypothesis claims that a child must know that there are underlying regularities in a language and "these regularities are representable in the form of paradigms" (Gopnik & Crago, 1991, 46). Thus, a grammatical deficit refers to the inability to build paradigms. The SLI children have a learning mechanism which views each item as independent of each other, and not as part of a particular paradigm. While learning an item they enter it into the lexicon with all its grammatical properties without building a commonality with all other similar items. Therefore, in their lexicon there is no relation between 'walked' and 'killed' (both follow the same rule for past formation). This clearly accounts for the findings that SLI children have the acutest difficulty in the use of past –ed morpheme and they produce very few overgeneralizations (sleep-sleeped, dig- digged etc.)

Within the paradigm of grammatical deficit hypothesis two further possibilities have been posed: feature deficit hypothesis and vulnerable marker hypothesis.

a. A feature deficit hypothesis is suggested by Gopnik and Crago (1991) that state that linguistic features are impaired in SLI children. As a result, these children have difficulty producing appropriate forms of words marking number, gender, tense and aspect and so on. The SLI children produce utterances where the expected markers are missing, or produced randomly. For example, when a child says "a computers", there is certainly a mismatch of features between the number of the noun and the article used. Similarly, the formation of progressives in English demands that both the auxiliary verb 'be' and the principal verb should have the feature 'progressive'. This means when someone produces "He is singing", the auxiliary *be* has the progressive marker, and the verb *sing* has –ing as the progressive marker. When a child has a feature deficit, (s)he is likely to produce utterances like "He is sing" and "He singing," where there is a mismatch of features. And the SLI children do produce such utterances. Some of the examples displaying a feature mismatch reported by Gopnik and Crago are

   - *Carol is cry in the church*. (aspect)
   - *A Patrick is naughty*. (proper names)
   - *Three Christmas tree* (number)
   - *Superman jump* (subject-verb agreement)

b. In contrast to the feature deficit hypothesis, Bishop (1994) suggests that children with SLI do have an underlying competence to understand the features of the language items, but due to limited processing capacity they cannot apply the knowledge consistently. This is understandable to the extent that, along with the language errors, the SLI children also produce utterances which are grammatically correct ("The queen is hiding"). This suggestion is called *vulnerable marker hypothesis*, in which use of the features depends on the processing capacity.

The capacity to process language is terribly limited for the SLI children, as a result of which a trade-off relation affects their language. For example, syntactic errors take place, when the utterances contain polysyllabic words. An analysis of the stages of language production suggested by William Levelt (1989) can account for such a relationship and therefore, reinforces the hypothesis proposed. *Conceptualization*, as the first stage of language production, takes care of the message to be produced only as an abstraction, whereas the linguistic elements to be used for conveying the message are added in the next stage, *formulation*. If the capacity to process language is limited, then there may be interference between these two stages and as a result of which, with the increase in complexity of the message the attention paid to the grammatical features decreases.

Therefore, while producing a complex sentence in terms of information, people tend to make more grammatical errors.

The manifestation of SLI varies among the population within a particular language, and it has also been suggested that the characteristics of SLI can be language specific (Leonard, Sabbadini, *et al*, 1987). So, considering the explanations posed by the different hypotheses, it can be stated that probably no one hypothesis is enough to explain the characteristics of SLI exhibited in all the languages.

V. THE NEED FOR TESTS IN THE MOTHER LANGUAGE

Quite a number of studies have been conducted in English, Italian, Spanish, French and Japanese to test the linguistic knowledge of the SLI children in their native languages. But, the languages of South Asia lack such researches. It thus becomes difficult to test the SLI children in countries like Bangladesh, India, Pakistan or Srilanka. In such a scenario what sometimes happens is since there are available tests for SLI in English and some of the language impaired children in these countries may also know English, English tests are used for checking the linguistic knowledge of the SLI children. But, obviously this cannot capture the problem with accuracy, as English is not the native language of those children. So, when a child is not able to respond well to a question in English, it does not necessarily mean that (s)he is language impaired. It may be possible that (s)he has not 'learnt' (as opposed to acquired) the second language well. In that case, a 'normal' child will have no problem in answering that in his/her native language.

Also, there are cases when an English test is translated into many Asian languages to serve the purpose. But, this is also problematic, because there are notorious areas in English, where the SLI children have major problems; but not all of them are available in the same form in other languages. For example: past inflection of regular verbs are difficult for the SLI children. Now, if a person wants to translate an English test into Bangla and test if that aspect is impaired in a Bangla speaking SLI child, then the effort will be fruitless, for Bangla does not have such a division (regular-irregular). Therefore, mere translation does not help. It is, therefore, very necessary to develop tests in every language so that the tests conducted are valid and can yield reliable data.

VI. SLI IN BANGLA

It was quite a revelation for the author that in Bangladesh there has been hardly any work done in SLI, and naturally, therefore, there is no identified group of children who have this disorder. But, since SLI is not a culture and language specific disorder and it has been identified among children of many languages, many children of our country must also be suffering from this. Tomblin *et al*. (1997) reported that as high as 7.4% of kindergarten children have SLI, but not all of them are detected in the general population. Only 29% of the population identified by his team was identified previously. This means that not only should each language have its own set of tests for SLI, but also there is an urgent need for identifying valid clinical markers in the language which can yield reliable data.

In every language, there are grammatical components which are obligatory in some contexts. During the developmental stages, a normally developing child may have errors in those areas, but once the "parametres are set" there is no more consistent deviation. But the impaired children, unlike others, do not outgrow this stage. According to Rice (1997), "… adherence to these grammatical principles is required if grammar is to be "OK", and if the grammar is incomplete, children are not "OK"" (352). Therefore, she suggests that identification of particular grammatical areas can have remarkable clinical significance as standard markers for SLI.

In Bangla, there is hardly any grammatical area which follows a regular-irregular pattern. Therefore, looking for such patterns (past regular-past irregular) following Ullman's theory may not be useful for us. But the unavailability of such a pattern in Bangla does not mean that it will not be possible to identify the disability among our children. The feature deficit hypothesis may be helpful for testing SLI in Bangla. Clahsen (1989) reported the German SLI children to be selectively impaired in marking grammatical agreement. They committed errors in subject-verb agreement and also in marking gender and number on the noun phrase. This reinforces the possibility of the previously stated suggestions that no one theory can explain SLI in all languages.

Therefore, in Bangla one can look for a regular-irregular paradigm and also see how the other grammatical features are marked. Some suggested areas for potential clinical markers are described below:

1. Causatives

Bangla verb roots follow two patterns; one ends in /a/ and the other ends in /no/. For example, one pattern gives root verbs like '*kora*' (to do), '*hasha'* (to laugh), '*bosha*' (to sit) etc. The other patterns gives roots like '*darano*' (to stand), '*dourano*' (to run) etc.

These two patterns follow two different types of suffixation for creating the causative forms. The root word that ends in /a/, attach a /no/ to it and makes the causative form. For example,

Kora + no= korano [to make (somebody) do (something)]
Hasha+ no= hashano [to make (somebody) laugh]

On the other hand, the root that already ends in a /no/ does not attach another /no/ to make the causative form. Instead, it adds a light verb to it. And, then that verb attaches a /no/ at the end. For example:

Darano→ dar korano [to make/ help (somebody) stand]
Dourano→ dour deyano [to make (somebody) run]

The second set of verbs is comparatively rare in Bangla and the causative formation for this set undergoes complex operations. Therefore, the first set may be considered regular and the second one irregular.

2. Verb inflections

Bangla verbs mark tense, person and honorifics. Unlike English, number of the subject is not marked on verbs in Bangla. For example,

Tense
Chheleti khele. [The boy plays.]
Chheleti khelechilo. [The boy played.]
Chheleti khelbe. [The boy will play.]

Person
Ami boiti kinbo. [I will buy the book.]
Tumi boiti kinbe. [You will buy the book.]
Tara boiti kinbe. [They will buy the book.]

Honorific
Apni kokhon elen? (to respected or distant people) [When have you come?]
Tumi kokhon ele? (to close ones or to people of the same age) [When have you come?]
Tui kokhon eli? (to friends or people considered to have a 'lower' status) [When have you come?]

It may not be possible to find a regular-irregular pattern here. But since SLI children have been reported to have problems with inflections, in Bangla they may have difficulties attaching appropriate suffixes with verbs.

3. Plurals

Bangla does not mark indefinite plurals on the noun. For example: 'a book' is '*ekti boi'* and 'some books' is '*koyekti boi'*. Therefore, to check whether a person marks plurals in noun is difficult with indefinite entities. But, definite entities carry plural markers on them. For example, 'the book' is '*boiti*' and 'the books' is '*boiguli'* in Bengali.

Definite noun pluralization in Bangla follows a pattern. There are two suffixes for pluralization; /ra/ and /guli/. The choice of suffixation depends on the meaning of the noun. If the noun is a human being, then the plural word will take the suffix /ra/. Otherwise, for inanimate entities and animals the plural noun takes /guli/. But sometimes /guli/ is used for human beings. For example, *chheleguli* (the boys). There are also other plural markers like /shob/, /borgo/, /brindo/, /shokol/ etc but those need not be considered here, as those are never used in spontaneous oral communication. Those are learnt explicitly and produced in formal contexts.

There is another alternative for the suffix /ra/ that is determined by its phonological environment. If the noun ends in a consonant, then the required suffix is /era/ in stead of /ra/. Therefore, Bengali has three alternative suffixes for definite noun pluralization; /ra/, /era/ and /guli/. It will be interesting to see how the impaired children assign these suffixes on definite nouns.

VII. SUGGESTIONS FOR TESTS

Any test for identifying SLI should have two sections: a production test and a grammaticality judgement test. A grammaticality judgement test is necessary because it, and not a production test, has been proven to be the true reflection of one's linguistic competence. Also, with the research conducted by Bishop (1994) a suggestion has come up that the linguistic competence of the SLI children may be intact inside with impairment only in production-based performances. Therefore, testing an SLI child through both the tests would be more reliable to arrive at any conclusion. Also, since SLI children have problems using language orally, the modality of the tests should be listening and speaking and not reading and writing.

1. Grammaticality judgement tests

A grammaticality judgement test typically has a set of items, where some of the items have grammatical errors. The participants are asked to identify the ungrammatical items and the errors in those. Some possible items have been suggested below which may obtain significant data about SLI:

<u>*Causatives:*</u>

1. *Meyeti boutike shajaay.*
2. **Rakhal goruguloke mathe chor koraay.*
3. **Daktar rogike showa koraay.*

<u>*Verb inflections*</u>:

1. **Ami agamikal bajaare jai.*
2. **Lokti maachh dhorchi.*
3. **Tui besh bhalo chhobi a(n)ko*.

<u>*Plurals:*</u> Since many a time pluralization in Bangla does not follow the rule stated earlier (*Napitera* as well as *napitguli* are correct.), looking for a particular correct utterance may not be useful enough to identify SLI. Also, the wish to say *napitguli* or *napitera* is determined by pragmatic knowledge to some extent and does not stay within the range of morphology. However, it will only be decided once we administer the tests with children and obtain the data.

1. **Cheyarera bhenge gelo.*
2. **Jatriyera train er jonno opekkha korche*
3. **Shikkhokguli chhatroder porachchen*

2. Production tests

First, the participants listen to the first sentence and then finish the following incomplete sentence by using appropriate words.

<u>*Causatives:*</u>

1. *Ami kuwa theke jol tuli.*
   Ma amake diye roj jol _____

2. *Baba amake dhomkaay.*
   Bhai babake biye amake _____

<u>*Verb inflections*</u>:

1. *Amra putul khelte bhalobashi.*
   Meyegulo putul khelte _____.

2. *Tini ekhon chithi likhchen.*
   Tini ektu pore chithiti post _____.

<u>*Plurals:*</u>

1. *Amake boiti dao.*
   Amake _____ *dao.*

2. *Netati bhashon dichchen.*
   _____ *bhashon dichchen.*

Following the model of the "wug test"[3], one may also wish to include some novel or non-words in the tests to check whether rule formation has happened or not.

VIII. CONCLUSION

Everything suggested here is still based on the existing theories; it has not been tested yet. In order for finding out how SLI actually operates in Bangla, we have to first design tests, administer these among children with language problems, and based on the findings we will have to find out the patterns of language problems in Bangla that are specific to oral language. And above all, raising awareness is imperative. No remedy is possible before the problem can be identified and acknowledged. So, it is nothing less than a duty of the linguists of our country to begin conducting

[3] Designed by Jean Berko Gleason (1958), "wug test" can check whether one can identify the underlying rule in a particular language. To do this, participants are shown pictures of imaginary creatures and told that "This is a wug (non-word) and now there are two of them. There are two _____?" If one knows the rule, then (s)he will be able to apply it in a novel context as this and be able to say "There are two wugs."

studies in this area so that valuable as well as reliable information can be found about the nature of SLI in Bangla and its remedial treatments.

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